

UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: M. Yavuz Dedigil et al.
Application Number: 10/582,921
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Group Art Unit: 1776
Examiner: Thomas M. Lithgow
Title: DISHWASHER COMPRISING A FILTER SYSTEM

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Commissioner for Patents
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APPEAL BRIEF

Pursuant to 37 CFR 1.192, Appellants hereby file an appeal brief in the above-identified application. This Appeal Brief is accompanied by the requisite fee set forth in 37 CFR 1.17(f).

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(1) REAL PARTY IN INTEREST

The real party in interest is BSH Bosch und Siemens Hausgeräte GmbH.

(2) RELATED APPEALS AND INTERFERENCES

There are no appeals or interferences that will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) STATUS OF CLAIMS

Claims 8-16 are pending. Claims 1-7 were canceled in the June 13, 2006 Preliminary Amendment. Claims 8-12 stand rejected and are the basis of this appeal. Claims 13-16 have been allowed. Claims 8, 13, 15, and 16 are independent.

(4) STATUS OF AMENDMENTS

The pending claims identified in the Claims Appendix correspond to the claims entered following the submission of the May 7, 2010 Amendment.

(5) SUMMARY OF CLAIMED SUBJECT MATTER

The present invention as recited in independent claim 8 relates to a device for filtering particles from a dishwashing fluid in a dishwashing machine, the dishwashing machine having

a dishwashing container 1 in which are disposed items to be subjected to the application of a dishwashing liquid 2 thereto such that particles disentrained from the items during the application of a dishwashing liquid 2 are entrained with the dishwashing liquid 2 (page 3, line 29 – page 4, line 6), the device for filtering particles comprising:

a container 1 operable to retain therein a predetermined quantity of a liquid mixed with at least one of a foam-forming substance and cleaning agents, the container including means (embodied as valve devices or a communicating pipe (page 3, lines 6-8) for producing a flow of a gaseous fluid through the predetermined quantity of the liquid so as to generate a foam layer 3 with the foam layer 3 having filter properties in that the foam layer 3 filters out from a dishwashing liquid 2 passed through the foam layer 3 a substantial fraction of particles entrained with the dishwashing liquid 2 and such filtered-out particles are retained in the foam layer 3 (page 3, lines 6-18).

As discussed on page 3, lines 6-18, in the present invention, the thickness of the foam layer can be varied and is adjustable in height. By metering the foam-forming substance, a foam layer of different thickness can be achieved, which is matched to the respective degree of contamination of the dishwashing fluid. For example, if a very small quantity of the foam-forming substance is added to the container by means of the dosing device, a thin foam layer is formed which can only absorb a small quantity of particles. However, if a larger quantity of the foam-forming substance is added to the container, a thicker foam layer is formed whereby larger particles or a larger number of particles can be filtered out. The requirement for foam-forming substance can be determined by means of a turbidity sensor, for example, which

detects the turbidity of the dishwashing solution, and thus regulates the thickness of the foam layer.

Using the foam to clean the dishwashing liquid is advantageous over features in the related art that are used, such as mechanical filters, for example, comprising a lattice network or a metal film with pores. The operating mode of mechanical filters is substantially determined by the surface condition and the pore size of the filter. Since the size of the pores substantially influences both the filter capacity and the cleanability, a pore size is selected which ensures the filtering of small particles and also a good cleanability. However, with mechanical filters, despite multistage filter devices, it is not possible to filter out fine and superfine particles such as food residue, for example, from the circulating dishwashing fluid. These particles are therefore continuously circulated and are only removed in part from the circulating cycle into the waste water at the end of the washing program, for example, during the clear rinsing.

(6) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

(a) Whether claims 8-12 are anticipated under 35 U.S.C. § 102(b) by any one of Kemper (U.S. Patent No. 6,413,366) or Britz (U.S. Patent Publication No. 2004/0256295) or Dolbear (U.S. Patent No. 1,478,703) or Dolbear (U.S. Patent No. 1,480,884) or DE 10250762 or Tlok (U.S. Patent No. 5,910,248).

(7) ARGUMENT

(a) Claims 8-12 are NOT anticipated under 35 U.S.C. § 102(b) by any one of Kemper (U.S. Patent No. 6,413,366) or Britz (U.S. Patent Publication No. 2004/0256295) or Dolbear (U.S. Patent No. 1,478,703) or Dolbear (U.S. Patent No. 1,480,884) or DE 10250762 or Tlok (U.S. Patent No. 5,910,248).

The grounds of rejection state that any of the cited patents disclose a device defining a container having a foam layer forming means and means in the upper portion of the container to guide in a fluid, and that the valve means are inherent or are specifically disclosed. The grounds of rejection specifically refer to Figure 1 of Kemper and a feed suspension at 5 into the foam layer. The grounds of rejection further state that in Figure 4 of Britz, there is an embodiment with feed means 7 into foam layer 12. Further, the grounds of rejection refer to the Dolbear patents which feeds through rotary drums into the foam layer. Also, the grounds of rejection state that DE '762 discloses six different embodiments with the feed being sent into the froth layer. Finally, the grounds of rejection state that Tlok discloses a foam layer 8 into which water and particles from influent water feed inlet 2 ultimately engages.

MPEP § 2131 provides that “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). “The identical invention must be shown in as complete detail as is contained in the ... claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9

USPQ2d 1913, 1920 (Fed. Cir. 1989). Moreover, “[e]very element of the claimed invention must be literally present, arranged as in the claim.” Id. Applicants respectfully submit that none of the six (6) cited references refer to or suggest a “predetermined quantity of a liquid” as recited in independent claim 8. In the present invention, as discussed above, the thickness of the foam layer can be varied and is adjustable in height. By metering the foam-forming substance, a foam layer of different thickness can be achieved, which is matched to the respective degree of contamination of the dishwashing fluid. The use of a predetermined quantity of liquid as claimed is a part of this process. Claims 9-12 are allowable at least based on their dependence on claim 8.

(8) CONCLUSION

In view of the foregoing discussion, Appellants respectfully request reversal of the Examiner’s rejections.

Respectfully submitted,

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CLAIMS APPENDIX

1 - 7 (Canceled)

8. (Rejected) A device for filtering particles from a dishwashing fluid in a dishwashing machine, the dishwashing machine having a dishwashing container in which are disposed items to be subjected to the application of a dishwashing liquid thereto such that particles disentrained from the items during the application of a dishwashing liquid are entrained with the dishwashing liquid, the device for filtering particles comprising:

a container operable to retain therein a predetermined quantity of a liquid mixed with at least one of a foam-forming substance and cleaning agents, the container including means for producing a flow of a gaseous fluid through the predetermined quantity of the liquid so as to generate a foam layer with the foam layer having filter properties in that the foam layer filters out from a dishwashing liquid passed through the foam layer a substantial fraction of particles entrained with the dishwashing liquid and such filtered-out particles are retained in the foam layer.

9. (Rejected) The device according to claim 8, wherein the means for producing a flow of a gaseous fluid are disposed in a bottom area of the container.

10. (Rejected) The method according to claim 8, wherein the means for producing a flow of a gaseous fluid includes apertures in a bottom sheet of the container.

11. (Rejected) The device according to claim 8 and further comprising means disposed in an upper area of the container operable to guide dishwashing fluid having particles entrained therewith into contact with the foam layer.

12. (Rejected) The device according to according to claim 8, wherein the container includes valve means in a bottom area of the container through which both the cleaning dishwashing fluid and the contaminated foam flow away separately.

13. (Allowed) A method for filtering particles from a quantity of liquid in a dishwashing machine, the method comprising:

flowing a gaseous fluid through a predetermined quantity of a liquid mixed with at least one of a foam-forming substance and cleaning agents in a container so as to generate a foam layer with the foam layer having filter properties in that the foam layer filters out from a dishwashing liquid passed through the foam layer at least a fraction of particles entrained with the dishwashing liquid; and

trickling a dishwashing liquid having particles entrained therewith downwardly through the foam layer, wherein at least a fraction of the particles are retained in the foam

layer, while collecting below the foam layer the quantity of dishwashing liquid from which the fraction of particles have been disentrained.

14. (Allowed) The method according to claim 13 and further comprising removing via suction foam that has been contaminated due to its entrainment of particles.

15. (Allowed) A device for filtering particles from a dishwashing fluid in a dishwashing machine, comprising:

a container structured to retain therein a predetermined quantity of liquid mixed with at least one of a foam-forming substance and cleaning agents;

a metering device structured to produce a flow of a gaseous fluid through the predetermined quantity of liquid so as to generate a foam layer with the foam layer having filter properties in that the foam layer filters out from a dishwashing liquid passed through the foam layer a substantial fraction of particles entrained with the dishwashing liquid and such filtered-out particles are retained in the foam layer; and

a turbidity sensor structured to detect a turbidity of the dishwashing liquid, wherein the metering device is further structured to vary the foam layer to match a degree turbidity detected by the turbidity sensor.

16. (Allowed) A method for filtering particles from a quantity of liquid in a dishwashing machine, the method comprising:

flowing a gaseous fluid through a predetermined quantity of a liquid mixed with at least one of a foam-forming substance and cleaning agents in a container so as to generate a foam layer with the foam layer having filter properties in that the foam layer filters out from a dishwashing liquid passed through the foam layer at least a fraction of particles entrained with the dishwashing liquid; and

trickling a dishwashing liquid having particles entrained therewith downwardly through the foam layer, wherein at least a fraction of the particles are retained in the foam layer, while collecting below the foam layer the quantity of dishwashing liquid from which the fraction of particles have been disentrained;

detecting a turbidity of the dishwashing liquid; and

varying the foam layer to match a degree turbidity detected by the turbidity sensor.

EVIDENCE APPENDIX

None

RELATED APPEALS APPENDIX

None